With the Maya, for example, we find a manner of writing composed of images, but they are intricate and tortured images, while in Egypt we are confronted with objects, animals, and human gestures whose lines are descriptive in the purest sense, avoiding all mental complications.

In the midst of the bas-reliefs—those speaking images—flows the stream of thought, expressed with the same images guided between straight lines as between the banks of a river, and this stream contains no interruption: nothing separates the words, neither hiatus nor conventional signs. A single exception is the royal name encircled by a "cartouche."

Under such conditions, how could this writing be deciphered? In order to separate possible words, it was necessary to know the methods of reading, and in order to know how to read the signs, it was necessary to know the words. The discovery of the Rosetta Stone inscribed with a bilingual text (the Egyptian hieroglyphic and demotic juxtaposed with the Greek) raised great hopes of solving this problem, but its solution had to wait for Champollion, who to his knowledge of Latin and Greek had added Hebrew, Chaldean, Syriac, Ethiopic, Arabic, and Coptic. In spite of this, it was necessary for him to employ a singular intuition—which could almost be called a *reminiscence*—in order to lay down all the foundations of the writing and language.

Champollion left behind a solid basis on which, after the correction of several errors, a corpus could be founded, permitting today a fairly good reading of the profane sense of the glyphs. But it is easy to forget that Champollion is the man of genius who, in ten years, with rudimentary means, and after only eighteen months in Egypt, was able to create the bases from which our philologists have been working for a century and a half.

He never got to know the great number of stelae and papyri that his successors were able to study (and the latter, moreover, achieved excellent work). When Champollion made his voyage to Egypt (1828–30), many of the monuments now excavated were then still partially buried (such as Edfu, Dendera, Esna, and Luxor, where only the tip of the colonnade of Amun was visible), and yet one remains surprised and filled with admiration for the greatness of the work this scholar



Hieroglyphs for "the gift of life." "stability," and "strength"

THE WRITING

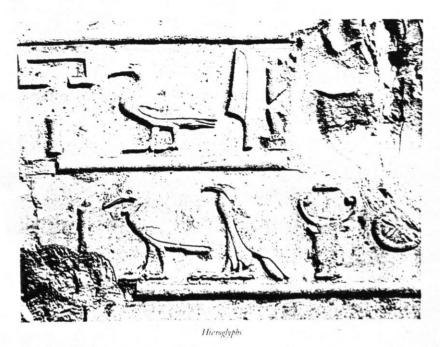


The first contact with the monuments of ancient Egypt always creates the same impression: the confrontation with another world. It is not so much the colossal massiveness that is striking but rather the cohesion of style, which does not speak to the ordinary sentiments of man and leaves no place for sensuality. In architecture, the curve occurs only to indicate an Osirian aspect: death and resurrection (the cyclic principle); elsewhere, all consists of straight lines, the writing is guided between rectilinear borders, the statuary displays severe hieratic bearing. Walls are covered with bas-reliefs where human figurations obey a rigid canon and are charged with attributes obviously having a definite meaning; headdresses and crowns bear no resemblance to what can be seen in the traces of any other civilization.

Ancient Egypt is surreal. It evokes respect, imposing itself by a royal style. Projecting itself toward a beyond, it remains rooted in all that which composes natural and human life. In its traditional figurations/rich in symbols, there is a serene simplicity and also a sureness that conviction alone can inspire.

At all times, people have searched for the causes of the force radiating from the vestiges of this civilization.

This curiosity was of course first applied to the unviolated writings carved into the stone of the monuments. But from Clement of Alexandria to Champollion the Younger, this writing had kept its secrets. It was an important moment in the history of mankind when Champollion rediscovered one of the meanings of these inscriptions—one of the meanings, because the other cannot be dissociated from the very spirit of the master builders' thought. It is one self-contained whole, a synthesis that cannot be transcribed in the words of a dictionary.



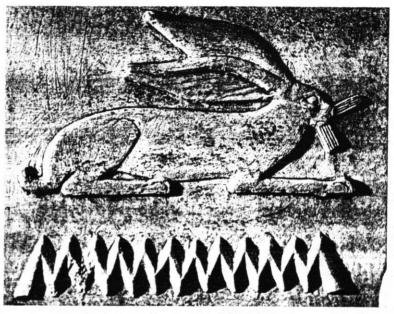
accomplished in such a brief time, for he died in 1832 at the age of forty-two, exhausted by his unflagging studies.

Perhaps it would be useful here to reproduce certain forgotten passages from the *Introduction à la Grammaire égyptienne* by Champollion the Younger, the cornerstone he bequeathed us, which after his death was piously edited by his elder brother, Champollion-Figeac.

EXCERPTS FROM THE INTRODUCTION À LA Grammaire Egyptienne By Champollion the Younger

Going back through the ages, archaeological science, after having reached the original source of Roman arts and civilization, concentrated its means and efforts on studying the monuments of ancient Greece. That famous land had been considered, in general and as a result of the basic education of successive European generations, as the primitive cradle of our civilization, the veritable native soil of the arts and sciences.

A conscientious examination of Hellenic monuments and traditions, however, singularly weakens and modifies this opinion. Such a study would have to disengage itself from the popular prejudice that tended to establish the system of spontaneous generation in the arts, sciences, and all social institutions on



Phonetic group un ("to be")

the soil of ancient Greece, in spite of factual evidence and positive testimony by the ancient Greeks themselves. This study would also have to prove that here, as perhaps everywhere else, the country was first inhabited by barbaric hordes and later occupied by a succession of foreign populations, whose arrival produced great changes and important modifications in the language as well as in the religion, in the practices of the arts, and in the customs of civic life.

The truly Hellenic population descended from the north, and then eivilization came to it from the south through foreigners who had been expelled from the castern regions of the ancient world by political circumstances. Such is the epitome of historical documents that the Greeks themselves transmitted and that concern their own primitive times. Thus it is in the Orient we must search for Hellenic origins; and archaeology, imbued with this truth, first of all proclaims the sublime perfection and incomparable superiority of the arts of ancient Greek...

Historians affirm that the first somewhat evolved forms of civilization were introduced among the small Hellenic tribes of Argolis and Attica by men from the shores of Egypt, who had come by sea. From that moment on, according to these historians, Egypt became a school where Greek legislators, reformers of its cult, and particularly Hellenes of Europe and Asia, went for instruction. The latter speeded up the development of Greek society in being the first to propagate, by their example, the study of sciences, history, and philosophy. It is thus by a thorough knowledge of the Egyptian monuments that we can trace the origin of the arts of Greece, as well as the source of a major part of its religious creeds and the exterior forms of its cult. We should particularly note the factual evidence as to the antiquity of the civilization on the

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Nile's shores, anterior to even a political existence of the Greeks, and further, the numerous relations of a nascent Greece with a venerable Egypt.

The renown and wealth of Egypt's soil, as well as its political importance from time immemorial, have bound the bistory of this country to that of all the great peoples of ancient Africa and Asia. But the cannals of most of those nations having irrevocably perished, it is the written monuments of Egypt we must interrogate: they will recall for us the names of the small tribes, now forgotten, who in those times were submitted to Egyptian power by the pharaohs' penetration into the interior of Africa, a summoning of barbaric tribes to civilization by contact or by example....

The number of variously dated monuments on Egyptian soil that have escaped both the devastation of centuries and bostile religions is still such that an abundance of direct evidence can be gathered concerning the ever increasing degree of civilization attained by an industrious people who pioneered the lower Nile valley at a remote epoch. For it must be said: Egyptian monuments of the most ancient times show no traces of the infancy of art; to the contrary, they all manifest mature and esperienced art. . . . It is true that Egypt retains no trace of its own origin; it is in that region, however, that we must seek the origins of both Greek art and civilization and, consequently, our modern civilization's point of departure.

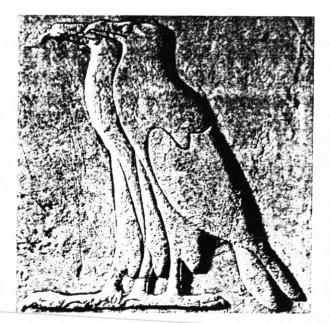
The study of Egyptian monuments and texts will lead us to the source of the first political institutions in Greece, those of Argos and Athens, by presenting in its true light the political and religious state of the ancient empire of the pharaobs while also substantiating the advanced state of Egyptian arts, long before the production of those same arts in Europe. Such a study will undoubtedly demonstrate the Egyptian origin of a very important part of Hellenic myth and religious practices, about which much uncertainty remains, and it has not as yet been possible to reduce them to a regular system, owing to the general failure to distinguish what is proper to the Hellenic population from that which it received from eastern colonies.

One will recognize the obvious origin of the Greek Doric arch in the porticos of Beni Hasan and in the galleries of Karnak, executed by the Egyptians well before the epoch of the siege of Troy. An unprejudiced examination of the historic has-reliefs of Nubia and Thebes will convince us that Greek art took from Egyptian sculpture its first models, which it servilely imitated while absorbing the wise simplicity of their style; its means thus enriched, the art of Greece adopted a principle that never belonged to Egyptian art: it bound itself to the reproduction of nature's beautiful forms, thereby moving further and further away from the primitive approach in order to attain a sublimity that can perhaps never be reached by the efforts of our modern artists.

The Egyptian origin of the sciences and the main philosophical doctrines of Greece shall perhaps become still more evident through the interpretation of Egypt's monuments. The Platonic school is nothing but Egyptianism that has left the sanctuaries of Saïs, and the old Pythagorean sect propagated psychological theories that are developed in the paintings and sacred legends found in the tombs of the kings of Thebes, in the desert valley of Biban el-Moluk.

THE ORIGIN OF PHARAONIC THOUGHT

Today Champollion's reflections concerning the pharaonic origin of Greek civilization are confirmed.



Hieroglyph of the phonetic characters aa



Nekhehet, the guardian deity of the South

Nineteenth-century Hellenists were still ignorant of—or preferred to ignore—the antiquity of the high pharaonic civilization and, remarking the sudden flowering of an exceptional art and science in Hellas, invented what became known as "the Greek miracle." This opinion was perfectly just fied as long as a slow development of Egyptian civilization was presumed to have evolved from a primary level. Such a view is today contradicted by the excavations and by documents pertaining to the first dynasties. Indeed, from the very start, there exists a hieroglyphic writing, perfected techniques, and a science that obliges us either to shift further back in time a primitive state of beginning and experimentation or to admit the existence of a humanity both inspired and prehistoric.

It was the intensely rationalist-materialist epoch of our nineteenth century that presupposed an evolution beginning with a primitive cell and progressing toward the human condition, all occurring in a purely material sequence and within the limited framework of our terrestrial evolution.

It is true that Nature shows us living beings at all intermediary stages between the cell and a culmination in human form, but it is nevertheless also certain that she very carefully hides from us the passage of the living organism from one stage to another. The theory of evolution is a purely logical supposition that is absolutely unconfirmed by life, even when we are shown the evolution of the human fetus passing through all the essential aspects typical of animal stages, from the most rudimentary to the human form.



Hieroglyth: ideogram of the falcon of Horus (Eighteenth Dynasty)

Yet the appearance of new microorganisms is constantly observed by our biologists, who speak of mutations, sudden changes in organisms.

This author places his belief in a humanity whose origins are still rich with animal instincts and that (by mutation?—or by a harmonic coincidence of the ambient cosmos?) has received the faculty of reason. This humanity, very close to nature and in direct contact with it, was able "to know" the forces that bring about the becoming of things; but this "knowing" was not a "knowing by learning." The downfall of this state, brought about by a faith placed in mental learning—a kind of scission between innate knowledge and its reflection through the exterior, in short, a dualization—that downfall was the condemnation to search for the source, "the condemnation to work." Now it happens that work for work's sake has never ennobled anyone: in order to harvest its fruit, which is the liberation of consciousness, perfection must be sought and the moment attained when one knows how to live within oneself the task to be achieved; then the performing of it ceases to be work, regardless of the effort involved.

We behold an example of this in the sculpture of ancient Egypt. He who was first to carve the falcon of Horus "lived" the aspect, bearing, and nobility of this bird in such a way that he did not "work" in order to sculpt it: he projected his consciousness—and not his vision—onto the stone. This example serves for the whole of pharaonic expression. Another story is the evolution of the mental faculties, a knowledge of a learned nature that is the "work" of research implied by the eso-tericism of the words found in the Mosaic Genesis.

This would explain the fact that at the known origin of the pharaonic empire, there was a complete and perfect civilization, a time when thought was translated by geometry and number through the pyramids and other monuments more directly than by the writings.

Historically there is a forfeiture of man's "divinity" to the profit of mental acquisition, accomplished by the Sethian tool of the imitator, the "ape of the Divine."

THE DISCOVERY OF PHARAONIC WRITING IN ITS HISTORICAL ASPECTS

Ever since the seventeenth century, the curiosity of scholars had been excited by some Egyptian art objects brought back to Europe, but the rare Greek texts concerning pharaonic writing remained inscrutable. Said Champollion: It was thought that the Egyptian writing called hieroglyphic did in no way represent the sound of the words of the spoken language; that each hieroglyphic character was the specific sign of a distinct idea; and finally, that this writing proceeded to the representation of ideas through symbols and emblems only (ideogrammatical form).

Such principles, which the learned of our day have not yet renounced, opened an extremely vast field for the imagination, or rather, gave it free rein. The Jesuit Kircher launched out into this field and, abandoning all reserve, abused the good faith of his contemporaries by publishing, under the title Oedipus Aegyptiacus, so-called translations of the hieroglyphic legends carved upon obelisks that had been brought to Rome, translations he himself did not believe, since he very often dared to support them with quotations from authors who simply never existed.

When the study of Coptic was introduced into Europe, P. E. Jablonski set himself the task of classifying those dispersed passages of Greek and Latin authors that concern the religious system of ancient Egypt. With the aid of Coptic vocabularies, he also attempted the interpretation of the names of divinities. But as Champollion observed, he would have to have been certain that the

Greeks and Latins in no way altered these names when transcribing them, and in order to prove this, it would first of all have been necessary to know the Egyptian spelling of these names, and during the whole of the eighteenth century, no progress was made in the deciphering of the hieroglyphic writing.

The mania for a priori systems, going beyond all limits of the possible, still served to turn away the more exacting minds from a type of study held in total discredit owing to the uncertainty of the methods employed or because of the extravagant deductions resulting from these methods.

Champollion cites Zoega as being among the only true promoters of Egyptian archaeology. This Danish scholar was profoundly versed in the classics and had a good command of the Coptic language.... He was the first to vaguely suspect the existence of the phonetic component in the system of the sacred writing, but he gave no extension to this notion, reducing it to a few signs that led to the expression of sounds by the same method as our writing game called rebus.

The *Description de l'Egypte*, published after the conquest by the French army, again created considerable interest in the learned world by revealing vast architectural treasures and an abundance of texts. Then, with the announcement of the discovery of the Rosetta Stone in August 1799 by a brilliant French officer named Bouchard, hope flared of at last penetrating the mysteries of the graphic system.

This bilingual inscription is divided into three sections: the upper part is in hieroglyphic writing, the middle in vulgar or demotic writing, and the lower in Greek.

As early as 1802, Silvestre de Sacy undertook its study. Soon afterward, Akerblad, a Swedish Orientalist, following the same lines as the French scholar, compared the Greek proper names cited in both the Greek and demotic inscriptions, at the same time deriving from this analysis a short demotic or popular Egyptian alphabet.

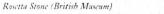
This initial success seemed at first to confirm the bopes raised by the Rosetta Stone. Akerblad, bowever, so successful in the analysis of the Greek proper names, obtained no results in his attempts to apply the fund of signs, whose value he had just noted in the written expression of the Greek proper names, to the reading of other parts of the demotic inscription.

Fuiling to assume, on the one hand, that the Egyptians could have written the words of their language with the medial vowels for the main part deleted, as has always been the practice with the Hebrews and the Arabs, and on the other hand having no inkling as to the fact that many of the characters employed in this text could belong to the class of symbolic signs, the Swedish scholar, dispirited by his fruitless efforts, ceased to occupy himself with the Rosetta Stone. The work of de Saey and Åkerblad had proved, however, that the vulgar writing of the ancient Egyptians expressed foreign proper names by means of truly alphabetic signs.

But seeing that the Rosetta Stone was partially destroyed, no one had as yet been concerned with deciphering the purely hieroglyphic part of the inscription. It was Dr. Thomas Young, a noted English scholar, who undertook the methodical examination of the three texts.

This work, the result of sagacious comparison, finally established several assured notions concerning the method peculiar to the different branches of the Egyptian graphic system and their respective connections. It firmished material proof of the ancient assertion regarding the use of figurative and symbolic signs in the hieroglyphic writing. The intimate nature of this writing, however, its relation to the spoken language, its -number, the essence and the combinations of its fundamental elements—these points remained indefinite and hypothetical.

It is true that the English scholar believed first in the alphabetic nature of all the signs of the demotic text (1816); then in 1819, he affirmed that the totality of the signs was purely ideographic in nature. The work of Åkerblad having nevertheless proved the existence of phonetic signs for the



transcription of Greek names. Young concluded that only for the transcription of foreign proper names did the Egyptians, as did the Chinese, use signs that were actually ideographic but deviated from their ordinary expression in order to make them accidentally represent sounds.

Champollion's great contribution was to have assumed and then recognized the existence of three types of signs, which shows his ability to find the just mean between extremes of hypothesis. He was therefore the first to comprehend the farmous words of Clement of Alexandria, subject of so many earlier commentators:

Those among the Egyptians who receive instruction learn first of all the kind of Egyptian letters called epistolographic; and second the hieratic, which is used by the hierogrammats; and finally the hieroglyphic kind.

(There are two kinds of) hieroglyphic letters: one is curiological, making a first use of alphabetic letters; the other is symbolic.

The SVMBOLIC (method is subdivided into several kinds): one literally represents the objects by imitation: another expresses them by trope (in a figurative manner); a third exclusively uses allegories expressed by certain enigmas: Accordingly, the Egyptians inseribe a circle when they want to write sun after this fashion, and they trace a crestent form in order to write moon. In the figurative method, changing,

and deviating the sense of objects by means of analogy, they express them either by modifying their image or by submitting it to different kinds of transformation. Thus they employ anaglyphs when they want to transmit praises to the king in the form of religious myth. Now here is an example of the third kind [hieroglyphic writing], which uses enigmatic allusions: the Egyptians depict by serpents the other celestial bodies because of the obliquity of their course, but the sun is portrayed by a searah. (Clement of Alexandria, from Letrone's translation)

Inspired mainly by this famous text, Champollion classified the hieroglyphs into three categories: A. The mimetic or FIGURATIVE signs:

These characters express precisely the object, the more or less faithful and detailed image of which they represent to the eye.



B. The tropical or SYMBOLIC signs:

The impossibility of expressing certain ideas—especially abstract ideas—by figurative characters led the Egyptians to invent a new order of signs by means of which these ideas were delineated in the images of physical objects having close or distant, actual or supposed relationships with the objects of the ideas to be graphically represented.

Champollion distinguishes four methods:

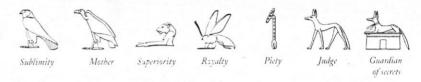
 By synecoloche, in depicting the part for the whole; most of the signs formed according to this method, however, are essentially nothing but pure abbreviations of figurative signs; thus two arms, one holding a shield and the other a pike or a shaft, signified an army, or combat.



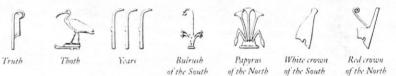
2. Proceeding by metonymy, depicting cause instead of effect, effect instead of cause, or the tool instead of the finished work. Thus the month was expressed by the crescent of the moon with the borns downward, as it shows itself toward the end of the month... the day, by the figuratize sign of the sun, which is its author and cause... the night by the sign of the sky combined with a star.



3. In using metaphors, depicting an object that had some real or generally supposed similarity with the idea expressed. In this way sublimity was designated by a sparrow bawk because of its very lofty flight... the mother by a vulture because such maternal tenderness was attributed to this bind that it was said to nourish its young with its own blood. (Champollion cites Horapollo for these last interpretations.

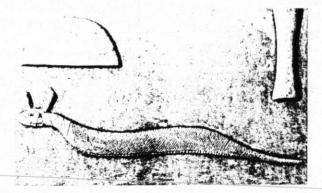


4. A further and last proceeding was by evigmas, employing, in order to express an idea, the image of a physical object related to the object whose idea was to be expressed, but related to it in a very hidden, very remote, sometimes even purely conventional manner. According to this method—which was a most indefinite procedure—justice was signified by an ostrich plume because all the feathers of this bird's wings were said to be equal. (After Horapollo)



C. PHONETIC Signs:

The characters of the third class are the most important, since in the hieroglyphic texts of all times the signs composing this category are much more frequently used than those of the first two. These signs have been qualified as phonetic because they do not actually represent ideas but sounds or pronunciations. (Excerpts from Champollion's Grammaire égyptienne)



Hierzglyphs in which the characters t and f are depicted

And so the complete bases of the reading were established. Already in 1822, Champollion's famous letter to Dacier announced the discovery of about fifteen phonetic signs. Ten years later, his Grammaire bequeathed a considerable number of words, the main verbal forms, the pronouns, articles, and adjectives and their uses and dispositions in the sentence. It is certainly remarkable that Champollion's thorough knowledge of Coptic, of such precious aid in numerous cases, did not mislead him in others, and that he was able to discern differences where these existed.

Nothing remained to be done but to analyze methodically each point in detail, a meticulous task to which his successors applied themselves. In 1930 the catalog issued by the press of the French Institute of Oriental Archaeology in Cairo contained almost four thousand hieroglyphic signs, and the Wörterbuch (the Berlin dictionary) supplied the meaning of about thirty thousand words or variants. The perfecting of the grammar continues year by year, and yet in the 1954 edition of his Classical Egyptian Dictionary, G. Lefebvre makes the following observation in his preface:



Hieroglyphs: "Words to be spoken four times"



Vulture belonging to the "two mistresses of the Two Lands" group

Our grammatical structures have by necessity a conventional and provisional character and would no doubt surprise a scribe of the House of Life, could he be called upon to view them. They will be either confirmed by time or modified by our successors; it will perhaps even become possible to "analyze the Egyptian language from within rather than exteriorly," which was Maspero's wish, as Capart recently recalled.

The impressive work of philologists since Champollion has certainly permitted a correct reading of the profane texts; in Champollion's footsteps, research has continued on the phonetic and grammatical aspects of the writing, but the words of Clement of Alexandria have been overlooked: there are at least two possible readings. While one of them is phonetic, the other is symbolic.

The image is neither a rebus nor a cryptogram but, naively, speaks to evoke an intuition. In no case must the latter be translated into words, reduced to a concrete notion such as a useful object or even a mental abstraction, which could distort the reading at first sight. When we designate, for

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example, by the word *borizon* the apparent line separating earth (or sea) from sky, this visible line is an abstraction, since it is nothing but an appearance: it has no material reality. But in formulating this notion by the word *borizon*, we see this line mentally, we are bound to see it if we do not want that word to become devoid of sense. Instead, when the pharaonic mind *represents* the horizon by the image of the sun between two mountains, that representation evokes the moment of the sun's emerging from darkness in the morning and returning to it at night. This is a *function*, a vital state of being. The sign "horizon," in its image, is positive, concrete, and has nothing abstract or conventional about it, but what it evokes is an "intuition" of a function: the function of appearing, of being having emerged from nonbeing. It would again be nothing but a chain of reasoning, hence a concretization of the intuition, were we to say: the sun was merely hidden....

Therefore when Champollion and philologists after him said that the Ancients used certain images in order to signify abstractions, they were not absolutely accurate in terms of truly pharaonic thought: it is rather the evoking of intuitions, which in our way of thinking are mental abstractions. But for the Ancients they were "states of being."

In order to sum up as simply as possible, let us bear in mind that the concrete symbol evokes the abstraction, while in our way of thinking, abstractions necessarily spur the search for the concrete image on which they can lean. This formula must be understood in a vital sense and applies, furthermore, to all the symbols of the hieroglyphs (taken in their hieratic sense).

Myth



Myth is generally taken to mean an account of the exploits, adventures, or avatars of fabled personnages composing a pantheon. Strictly speaking, however, myth must be seen as the symbol of a theogony. It is symbol inasmuch as it incarnates cosmic functions in human form. Consequently, through images, it evokes the functional principles of the universal law governing the becoming of things, the genesis of that which, from the human point of view, appears to be the effect of an absolute cause variously known as Devas, Theos, or God, and called, in ancient Egypt, *Neterneteru*, the Principle of principles.

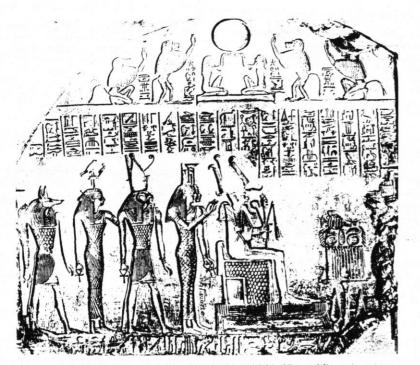
Myth is therefore the anthropomorphization of the elements of a philosophy, and its understanding as such presupposes a knowledge of the natural bases laid down as premises.

Since it is man who judges and thinks the principles of the universe, he concretizes them into human form, which is natural evolution at its highest known state. As a finality of nature, the human being necessarily epitomizes all the phases of this becoming and can thus be regarded as the representative of the universe: *Man. know thyself and thou shalt know the universe and the gods*, it was written at Delphi. This thought has served as the foundation for all revelations concerning the secret of becoming and the return of being to its source.

There are two aspects of this conception of myth: the first gives a *human* nature to cosmic principles by attributing to this symbolization ordinary human feelings and reactions; this lends a historic character to myth. The second, and typically pharaonic, aspect is simply an anthropomorphization of those principles: although represented in human form, human feelings are not attributed to them. It is a kind of synthesis between fable and myth. In order to give life to certain typical

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Anubis, Hathor of the amenti, Horus, Nephthys, Isis, and Osiris (Nineteenth Dynasty)

qualities that are universal, although they can only be shown in a restricted aspect, the poet chooses among the animals those incarnating these qualities most accurately. Then he makes them speak and behave in the manner of men. In this case we are not concerned with historicity but with pure symbol.

Pharaonic myth combines fable and anthropomorphization into a perfect natural symbol to express a knowledge concerning life's secret. It does not situate in time events that in reality are constant, but it does, on the other hand, situate them in space, that is to say, in situ, taking into account a natural concordance such as orientations, surroundings, and symbioses.

Accordingly, three main centers are found, each revealing the mystery of creation under a different form: Heliopolis, Memphis, and Thebes, and each province, or nome, has its own particular cult with its *local neter*, its myth and legend.

The Osirian myth, which reigned on earth at the beginning of time, signs each site with one of its episodes: it is by the mouth of Tanis that the coffin of Osiris, murdered by his brother Seth, was washed into the sea. It is in Coptos that, through the celestial winds, Isis learned of the death of her spouse, and it was in Byblos that she found the sarcophagus of Osiris, around which a marvelous tree had grown. And it is in the marshes of the Delta that Wadjet, the female divinity of the

North, secretly raised the young child Horus, who was later to engage in interminable combat against Seth in order to reconquer his father's heritage. When Isis brought back the coffin of her husband, Seth dismembered the body of Osiris, flinging the pieces into the Nile, which dispersed them throughout the land. But Isis recovered every part of this *neter's* body; she presented each different part as a relic to the different temples of Egypt, and thus every spot is consecrated by the relic it received or the myth connected with it.

HISTORICAL ACCOUNT OF THE MYTH

When studying pharaonic beliefs, it is tempting to try to unite into a single system all the rites and doctrines dispersed throughout the land. The problem posed by such an "account" of pharaonic "religion" is complex enough to have raised numerous interpretations, each one perfectly defensible from a particular point of view. However, these different theories are in opposition to one another and propose contradictory theses, "from the rudest fetishism to the most subtle symbolism," as the abbé Drioton wrote in 1938.

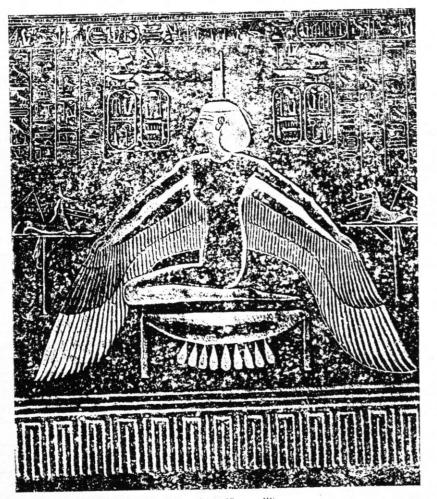
It is true that there is no hieroglyphic text that presents the religion in the form of a dogma *dictating* a definite set of beliefs. And yet in the temples bordering both banks of the Nile, in tombs, on stelae and papyri, we find innumerable inscriptions relating to all the nuances of cult and myth, to all that can be summarized by the word *religion*. "And yet, in spite of the richness of documentation, which could almost be called excessive, it is impossible to set forth a perfectly coherent synthesis." (E. Drioton and J. Vandier, *LEgypte*, p. 63)

Indeed, religion such as we conceive it today presupposes the existence of sacred texts expressing in "official and definitive" form a dogma upon which believers bestow their faith. "With the religion of ancient Egypt we have a quite different state of affairs: in order to understand its essence, the terms of the modern conception must be turned upside down. Its basis was not faith but cult and, owing to the circumstances of its development, local cult: the fact of rendering homage to a god of a specific name who was both recognized and proclaimed lord and master of a specific site." (Ibid., p. 64)

This refers to the local cult peculiar to each of the forty-two nomes of the empire of the "Two Crowns." But side by side with this cult, which had as many *neters*—or even triads—as there are



Hieroglyph: "Seth"



Isis (sarcophagus of Ramesses III)

provinces, there is abundant testimony of a sacred history that translates under the form of myth the origins of the world and the mystery of creation. By general agreement the popular cult is therefore distinguished from the teaching of the temples. But this distinction still does not resolve the irritating problem: how could such a collection of creeds be elaborated into a totality that finally constituted a "religion" able to last over four millennia?

Looking back to the origins in prehistory, we note the existence of numerous symbols that will figure as the emblems of nomes throughout the entire historical period; they will be attributed to the local neter, as for example the bucranium of Hathor, the crossed arrows of Neith, or the symbol of Min (which some claim to be a thunderbolt and others, a lock).

The first question concerns the choice of these emblems: since we are supposedly dealing with primitive peoples, such a choice could only have been dictated by fear or superstition, which helps explain the case of the crocodile or the serpent but not the symbols for Hathor and Neith, and so many other completely inoffensive objects. It was therefore supposed that long before the historical period, the land was peopled by tribes or "clans," each having its particular "gods," their symbols corresponding to a primitive totemism. Violently attacked, this interpretation gave way to the theory of fetishism, doing no more than replacing one word with another and still bringing no solution to the problem posed by the elaboration of great cosmogonic systems. It was then that scholars turned to the legends to find the historical origins of the religious and political conquest of the country.

According to the Palermo Stone and the Turin Papyrus, there were first of all divine dynasties, then the "Venerable Ones," and finally, the Companions of Horus. A great mystery hovers over the latter, whose reign alone is supposed to have lasted more than thirteen thousand years before the unification of the land by Menes, the first historical king. On the other hand, the monuments show, and tradition affirms, that two important religious centers existed before Menes, the double city of Nekhen-Nekheb for the kingdom of the South (assigned to Seth with the white crown) and the double city of Dep and Pe for the kingdom of the North (assigned to Horus with the red crown). Some scholars have held that perpetual quarrels between Seth and Horus could be found in the myth, and that in the final victory of the latter resided the historic origin of the conquest of the entire territory. But seeing that it has not yet been possible to determine whether the civilizing of Egypt proceeded from the north southward or inversely, the skirmishes between Seth and Horus have had to remain confined to the realm of myth.

And so the historical vision has been extended to the whole of the pantheon, deeming each nome to have originally been a small independant state, conflicts to have broken out between these states, and the triumph of the stronger to have resulted in the supremacy of the victorious neter, and, it was logically concluded, this is how Atum, supreme neter of Heliopolis, obtained hegemony under the Old Kingdom; a further conclusion was that Menes, a king native to Heliopolis, finally unified Egypt. All told, it was a political conquest in religious guise. But this interpretation still did not explain the origin of the philosophy of the temples nor the coexistence of all the local cults and the four great centers: Heliopolis, Memphis, Hermopolis, and Thebes. And so the notion of syncretism was proposed, the fusion of several philosophical systems under the most powerful authority.



But however attractive these *totemist*, *fetishist*, or *syncretist* theories may be, they do not resolve the crux of the problem, which consists precisely in the elaboration of these systems. Furthermore, according to our way of thinking, one of these "systems" should have predominated and gradually smothered the ancient beliefs of the conquered barbarians. No such thing occurred, and the parts coexisted within the whole during the entire pharaonic empire. Such facts, and the quandary one encounters when collecting under the word *religion* creeds and rites of such apparently different nature, lead to the following conclusion:

Their doctrine spread according to the fame of the temple; it would then emigrate and influence the theology of the more obscure sanctuaries. All told, it was nothing but the collective opinion of those first faithful ones, the priests, seeing that the king was the only lawful pontiff....

[This doctrine] thus left an open field for other opinions to those who frequented the same temple and who practiced the same religion, one as authentically as the other: fetishists or symbolists, anthropomorphists or partisans of the spirituality of divine nature, polytheists, henotheists, or monotheists in varying differences of expression, supporters of the historicity of myth, of its allegoric or naturist interpretation. All these creeds, which can only be expressed in contradictory dogmas, have in fact found their place side by side in Egyptian religion and have left their traces in its writings. This is why it is possible to define Egyptian religion by its cult, which was unified, and impossible to do so by its dogma, which was not only manifold but also diversely interpreted according to religion. (Ibid.)

It would be difficult to present a better summary of the different opinions put forth concerning the apparent multiplicity of pharaonic beliefs. This multiplicity will remain an enigma as long as these creeds are considered to be dogma or even *several* dogmas differently interpreted according to different centers, when it is actually the illustration of a philosophy relating the successive phases of becoming.







Nome of Heliopolis

Innu (Heliopolis)

THE MYSTERY OF HELIOPOLIS

The Heliopolitan revelation is known mainly through the carved texts lining the long alabaster or limestone walls of the corridors and funerary chambers in the pyramids of the Fifth and Sixth Dynasties: hence their name Pyramid Texts. These inscriptions are worded in archaic style, and this has caused them to be compared with the celebrated Edwin Smith Surgical Papyrus, the original of which is attributed to the time of Djoser (Third Dynasty). But since other medical papyri worded in the same style relate the divine origin of a certain "Treatise of the Heart," found *beneath the feet of Anubis along with other ancient writings* during the reign of one of the first kings of the First Dynasty, there is reason to believe that all these texts go back at least to the time of Menes, at which time the myth, completely formed, appears.

The pyramids affirm the faith in a one and only god, indefinable and eternal, Neter of neters: He whose name is hidden, He who has no limits, the incomprehensible.

In Heliopolis, the Innu of the North, the creative act is revealed with the appearance of Tum (or Atum). This word serves to express at once the *affirmation* (of existence) and the *negation* (of the original unity by the very fact of that creation). Accordingly, the word expresses being and non-being; nonbeing becomes the source, and being becomes its negation.

This reversal of notions is typical of pharaonic thought.

Tum will next bring into the world the divine Ogdoad, which, with him, will form the Great Ennead, analysis of this creative act.

It is said of Atum:

He who was born in the Nu when heaven had not yet become, when earth had not yet become, when the two supports [Shu and Tefnut] had not yet become, before the neters were born, before death had become, before there had become, before there had become the quarrel . . . the voice, anger, and slander . . . before the Eye of Horus had been put out, before Seth's testes were severed. (Pyramid Texts 1040 and 1463-66)

Such is the mystery of creation, the scission of the *oneness*, Nun, whose legend adds, concerning Ra, the universal aspect of Tum:

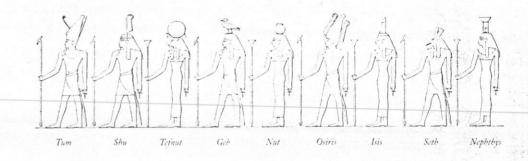
And Ra said to Nun: O most ancient of gods, Thou in whom I have come into existence.

Nun is the abstract, primordial milicu, symbolized by the waters, the cosmic ocean, as the papyrus of Nesiamsu specifies:

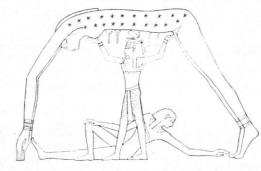
When Atum had emerged from Nun, the primordial waters, before beaven and earth were born, before worm or reptile was created, he could find no place to stand upon. (A. Erman, La Religion des Egyptiens)

Then Tum came into being: Thou bast sprung up as primordial billock. Thou hast risen like the bird of the stone [ben-ben] within the abode of the Phoenix at Heliopolis.

Thou hast spit forth [ishsh] Shu, Thou hast hawked up [tefn] Tefnut. (Pyramid Texts 1652) This mysterious dualization produced Atum, the hillock, for is it not evident that Atum has himself become that primordial knoll? And this polarization is creation. Nun and Tum will then



appear as sky, Nut, and earth, Geb. That which has separated them will also take form, for the legend says that when spitting *(isbs/c)*. Atum created Shu, and when expectorating *(tefn)*, he created Tefnut, and together they compose the firmament, which distinguishes and separates heaven and earth. It is the firmament of the Mosaic Genesis. Accordingly, spitting is air and water, the *upteand* spouting of the mouth, actually coming from Nun, the primordial ocean, but through Atum.



Shu separating Nut, the sky, from Geb, the earth

Nun, unity or the expression of oneness, is but does not exist and

thus cannot cease to be. Along with the eight principles, four male, four female, who have sprung from the first seission, Atum forms the Great Ennead of Heliopolis:

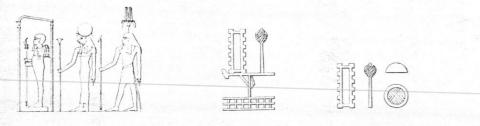
O Great Ennead of veters in Heliopolis, Tum, Shu, Tefnut, Geb, Nut, Osiris, Isis, Seth, Nephthys, which Tum brings into the world by projection of his beart, as his own birth, in your name of the "Nine Bows" none of you is separated from Tum. (Pyramid Texts 1655)

It would be wrong to consider the ennead as a series of nine principles. It is but a single state that splits up and could symbolically be called "karyokinesis," the function of dualization as it appears in cellular organic life.

With the elements of creation recounted at Heliopolis, all that will constitute the world has been defined: Nut, the sky, supported by Shu and separated from the earth, Geb; then Osiris, the principle of regeneration; Seth, the fallen archangel who opposes the coming forth of the generating fire, Horus. Shu, the air, sustaining life, will make Nephthys, and the invigorating, vitalizing fire in Nut, which animates all life, will make Isis.

This is confirmed by the attribution of the four canopic jars containing embalmed organs: Nephthys protecting the lungs, and Isis, the liver, whose action is well known as the separating and "cooking" of the blood.

Heliopolis gives the entire metaphysics of the cosmic opus, all the bases on which the sensorial world will be grounded to become accessible to human intelligence.



Ptab, Sekhmet, and Nefertum

Nome of Memphis The White

The White Walls (Memphis)

THE MYSTERY OF MEMPHIS

It is at Memphis, the White Walls, in the temple of Ptah, that the metaphysical principles are endowed with bodily form. What is affirmed at Heliopolis is here explained. In Memphis is taught the work of Ptah, that of "giving form" and of animating these forms.

The most ancient known text concerning the Memphite mystery is a copy of an old text said to have been destroyed by worms. This copy, on black granite, was made by the Ethiopian king Shabaka. Sethe, for linguistic reasons, dated the original as stemming from the first dynasties:

It is Ptab, who is called by the great name, Tutenen. . . . He who begot himself, says Atum, he who gave birth to the company of nine neters.

After an account concerning the death of Osiris and the conflict between Horus and Seth, there follows the description of Ptah as creator, he himself being the Ogdoad:

The neters, which have their shape in Ptah; Ptah on the great throne... Ptah-Nun, the father, who [hegot] Atum. Ptah-Nunet, the mother, who hore Atum. Ptah, the great one—he is the heart and the tongue of the nine neters. Ptah... who gave hirth to the neters Ptah... Nefertum at the nose of Ra each day.

It is the same fire immanent to the oneness Num that made Tum appear. This same fire is now Ptah owing to its materialization through Tum.

It arose as heart, it arose as tongue, as a symbol of Atum. ... Ptab is the very great one. ...

The heart and tongue have power over all limbs because of the doctrine that it [the heart] is in every body and that it [the tongue] is in every mouth of all weters, all men, all eattle, all reptiles, all that lives, in that it thinks all that it [the heart] will and commands all that it [the tongue] will.

His nine neters are before him as teeth and lips.... Atum's nine neters have indeed arisen from his seed and his fingers... yet the nine neters are the teeth and the lips in his [Ptah's] mouth, which told the name of all things, from which Shu and Tefnut proceeded, and which created the nine neters.

The sight of the eyes, the hearing of the ears, the breathing of the nose, it is communicated to the heart. This it is which lets all knowledge come forth, and it is the tongue that repeats what the heart thinks.

Thus all neters were born and his [Ptabs] nine neters were completed. Every word uttered by Ptab came forth from what the heart had thought and the tongue had commanded. In this way also kas were created and hemsut determined, which bring forth all nourishment and all food through his word. (trans., The God Ptab, S. Holmberg)

Ptah incarnates himself by being both the fire that will coagulate Nun and the resulting hillock, Turn. As fire he is *active power* and thus, simultaneously, cause and effect.

In the Pyramid Texts, Ptah has already been referred to as "chief artisan" and "creator of forms," and later legends present him modeling the universe and men on a potter's wheel. Ptah is also the "patron" of all artisans and of all human works, and it is therefore said in the text of Shabaka:

He who does that which is loved, and he who does that which is abhorred: Life is given to the peaceful man and death to the wrongdoer. Thus all work is done and all handicraft, the work of the hands and the walking of the legs, and the movement of all [other] limbs according to this command that the heart has thought out and that comes forth through the tongue, which is the being of all things.... 32



Ptah (Turin Museum)

Thus Ptah was content after be had made all things and all neters' words. He had indeed borne the neters, made the towns, founded the provinces, and placed the neters at their places of worship. He had determined their offerings and founded their sanctuaries, he had made their bodies as they desired.

Thus the neters entered into their bodies of all kinds of wood, all kinds of minerals, all kinds of clay, and all kinds of other things that grow thereon, in which they had taken shape. (Ibid.)

This text confirms the word *neter* as meaning "specifying functions."

Ptah is "Fire fallen into earth" and he will become the Greek Hephaestos, the divine blacksmith who taught the arts to men. The female principle of Ptah is Sekhmet, the sanguinary lioness who, in a legend connected with the myth of the Solar Eye, almost destroyed all humanity. The child born of the couple Ptah-Sekhmet is Nefer-Tunn, "the fulfillment of Tunn," who appears as a lotus flower that Ra, according to the Pyramid Texts, wears on his nose each day.

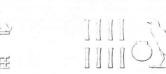
Sekhmet is often called the "Great Enchantress"; she is the protectress of doctors, who were said to be "priests of Sekhmet and magicians." Under the name of Menhit, however, she becomes the preeminent goddess of war. Then, from dreaded lioness, she resumes the peaceful aspect of Hathor upon returning from the South, where she cooled her ardors in the waters of the Abaton (near Philae).

From Hathor, "the house of Hor," will be born the little Ihy who holds the sistrum and the *menat*, which are Hathor's own symbols. In Dendera, Hathor is called "the Golden One." The figure of Ihy, the *neter* of music and harmony, brings to mind the Greek myth of Aphrodite and Ares conceiving Harmonia.

Hathor is venerated throughout Egypt under different names and with different qualities. She is herself the Eye of Ra, the apparent disk, and thus she undergoes the vicissitudes of the solar course. Hathor is also the "mother goddess," and in this

capacity she will be identified with Isis. She is the celestial cow as well, the divine nurse whose milk will nourish the kings. Finally, there are the seven Hathors who preside over the destiny of the newborn child.





City of the Eight, Khemenu (Hermopolis)

THE MYSTERY OF HERMOPOLIS

Nome of the bare

The name of Hermopolis, city of Hermes, is but a later Greek appellation of the great religious center of Thoth. The true and sacred name of the capital of Upper Egypt's fifteenth nome was Khemenu, "the city of the Eight," where the eight pristine *neters* appeared. Its civil name, Un, was designated by the nome's emblem, the hare, and signifies "existence."

Thoth, or Djehuty, was likened to the moon, whose birth is recounted in an ancient legend:

While Ra was in the heavens, he said one day: *Have Thoth come unto me, and Thoth was brought to him at once.* The neter's Majesty said to Thoth: *Be in the sky in my stead whilst I shine for the blessed in the inferior regions.... Thou art in my place, my representative, and thus thou shalt be named: Thoth, the replacement of Ra.* Then all manner of things sprang up as the result of Ra's play upon words. He told Thoth: *I shall make it so that thou wilt embrace* [ionh] the two skies by thy beauty and thy rays—and thus the moon was born [ioh]. Further on in the text... I shall make it so that thou wilt send [hob] greater ones than thee—and thus the lbis [hib], the bird of Thoth, was born. (Erman, Religion des Egyptiens, p. 91)





The baboon of Thoth before the clepsydra (Great hypostyle ball, Karnak)

This is how Ra, the solar light, while beneath the earth, has himself replaced by the moon and its light: Thoth.

Numerous are the legends attributing creative power to the very pronouncing of the name. This efficacity of the word at the source of things sensorial pervades the hymns, prayers, or litames. These are mainly based on "word games," which lose their meaning in translation. To name is to call into life, and it is said in the legends of Isis and Ra that to know the "secret name" is to know the means of warding off malefic forces. To know the "secret name," then, would be to know the function.

Thoth, Thrice-Greatest (whence Hermes Trismegistos), is the divine scribe who transmitted all science to men, be it astronomy, medicine, or the rituals of the cult. Thoth is the master of *netermedia*, or divine staffs, the hieroglyphs. He is the inspiration and patron of every scribe or student of the "House of Life." In one of the sanctuaries of each temple are kept the "writings of Thoth," his sacred scrolls, and the priests alone are allowed to consult them.

The animals consecrated to Thoth are the ibis and the baboon. Thoth is the inventor of the calendar, the regulator of time, the dispenser of the years. It is owing to him that the barque of Ra sails the immensity of the diurnal as well as the nocturnal sky, crossing "in peace" each hour protected by the twenty-four *neters* attributed to each division of the daily cycle. Thoth is the Great Judge who "arbitrates" the eternal enemies, Seth and Horus, and he is cited in this capacity as far back as the Pyramid Texts.

35

In Hermopolis, however, Thoth is never cited in the myth of creation. Here the myth is a resumption of the Ogdoad of Heliopolis, but only abstruse principles appear at the beginning.

Before creation, there existed a serpent named Kem-at-f, "He who has accomplished his time." Although it is said that Kem-at-f died after having given birth to a second serpent, Ir-ta ("creator of the earth"), it is elsewhere affirmed that Amun of the temple of Karnak is himself Kem-at-f. As its name indicates, the second serpent was the true author of the world, and it was this Ir-ta (later merged with the ithyphallic Amun of the temple of Luxor) who created the eight primeval *neters*.

The Eight Primordials form four couples of serpents and frogs whose mysterious names are interpreted as follows:

The first couple, Nun and Nunet, personifies the primeval waters or the space of the world before creation. The second couple, Heh and Hehet symbolizes water "searching for its path" (*beb* means to search). The third couple, Kek and Keket, signifies the darkness that reigned upon the waters before the appearance of the sun. The fourth couple bears several names, the most frequent being Niu, "He who turns away and disappears," and Niat, or Amun, "He whose name is hidden," and Amunet, his female principle. In Hermopolitan cosmogony, the part played by this fourth couple is that attributed to the "spirit of God moving upon the face of the waters" in the biblical account of creation. (From J. Vandier, *La Religion des egyptiens*, p. 63)

And so the Eight Primordials were created, but the world was still darkness and silence. Upon the waves of the primeval waters, these eight were carried to Khemenu, where a hillock of mud had arisen. On this small hill an egg became and of this egg was born a goose, who flew off, cackling. Then day appeared, for this bird was none other than the Great Cackler, the sun itself, author of the first ray of light and of the first noise rending the silence.

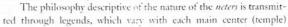
When their creative work was accomplished, the Eight Primordials died and were buried at Medinet Habu, across from Thebes. A small temple still stands at their burial place, to which Amun of Luxor went every ten days in order to make offerings to them.

"The idea that a god might die is incompatible with our way of thinking," remarks the great Egyptologist Erman, but he later acknowledges: "The true sense of all the subtleties gathered here escapes our uninitiated minds." (Erman, *Religion des egyptiens*, pp. 121–22)

It is indeed difficult to admit the death of a "god," considering our interpretation of this word. Once again our conceptions must be turned upside down in order to penetrate to the depths of pharaonic thought. For the Ancients, the word *neter* referred to active principles, to the causes of phenomena. This word has been translated as "God": consequently people speak of pharaonic "gods," and herein lies a source of confusion. To deists, God is the Creator, to whom they attribute a free will similar to man's but situated outside of the world.

This is not the concept pharaonic Egypt attached to the term *neter*, seeing that a clear distinction was made between metaphysical *neters*, cosmic *neters*, and the *neters* responsible for natural facts that concern humanity. These principles are anthropomorphized, but they are not humanized, as are the gods of Olympus, for example.

The "principle," or *neter*, is not a participating agent; it only designates a *mode of action*. The *neters* are the laws of divine harmony; they direct the affinities and concordances, they give rise to forms and signatures, command the phases of becoming and its return to the source; they characterize life. Thus the *neters* are *conscious* principles, but they are without *free will*, without the faculty of deliberate choice.



because the same "mode of action," or principle, changes its aspect according to the medium upon which it bears; the action of fire, for instance, will be different on fire, on water, on air, or on solid bodies.

Thus, in the Mystery of Heliopolis, Amun is an abstract principle: *He whose name is hidden*. In Hermopolis he becomes the breath that animates air and wind. We have seen before that Kem-at-f, "He who has accomplished his time," is said to have died and also said to be Amun of Karnak himself. This apparent contradiction stems from a misinterpretation of the word *dead*: when activity has produced its fruit, it stops being, as such, since it has fixed itself within the fruit.

THE MYSTERY OF THEBES

The Theban revelation is intimately linked to Hermopolitan cosmogony; in Khemenu, however, the generative "milieu" is described, while at Thebes, the capital of the Wast nome (the key of the Nile), the fruit of this genesis is defined—through Amun, Mut, and Khonsu.

One of the hymns in the Ritual of the Daily Divine Worship defines the nature of the Theban Amun:

Salutations to thee, Amun-Ra, divine form born the first time, Master of Eternity, One and Only One who gives birth to recters, who gives birth to men, through thee all things come about.

Master of Life, Thou comest forth as one only, alone in Nun, before thy father Geb [carth] and thy mother Nut [sky].

Thou art as Horus who illuminates the Two Lands with his two eyes.

It is not the solar disk that shows itself to the inhabitants of the sky, but thine head that reaches heaven in thy divine form, exakting thy two planes and coming forth from the waters....

He [Pharaoh] knows thy perfect names and all that thou didst while [still] the One and Only in Nun, in thine own name of Creator whose heart is tireless.

All the neters rejoice and worship their Lord, this One and Only One who hides himself [Amun] from his own creations, who ruled this earth upon emerging from the Waters, who weiled the Fire of the Void, who elevated it in his name of "Breath of Life." (Berlin Papyrus, chapter 40)

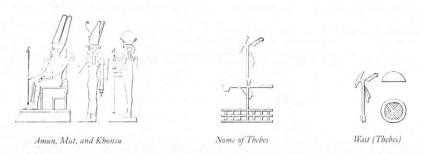
Thus Amun is described as he who hides, who contains (like the veil behind which is hidden) the fire of the original void and so becomes the breath of life.

In the Theban triad—Amun, Mut, and Khonsu—the female aspect of Amun is Mut. This can be illustrated in the following manner: the moon, as reflector, is the female aspect of the sun. In this way does a nameless activity become perceptible (physically known) through the obstacle that is of its own nature.

In life, this femininity conceives, incubates, makes live, and makes die at the same time, as the hen brooding her egg puts it into a state of "putrefaction" (death for rebirth) in order to hatch the chick. This illustrates the character of Mut, whose name can be written either with a vulture in which case it signifies "mother," or with an owl (letter *M*), in which case it signifies "death": Mut unites what these two words have in common. The activity of Mut as incubating principle implies the regenerative death symbolized by Sekhmet (who is still known through legend as a slaver of children). She represents the generative "Fire" of Ptah acting "in earth" or "in what is body."

These mythical transcriptions must be understood as "functions"; being of universal nature, their description is bound to be complex.

The set of temples forming Karnak is called the *seats of Apet*, and this word in itself is cabalistic. The female hippopotamus, which symbolizes the gestating matrix, is called Apet. Now



Apet, or Ipet, derives from the root *ip*, "to count" or "to enumerate." It follows that gestation, being a multiplication, is identified with the fact of numbering. In accordance with the *function* taught in that group of temples, the name Karnak therefore means: the site of the *tbree seats* or phases of gestation.

To each phase, Karnak consecrates sanctuaries that are so many chapters of a vast philosophy, each part being linked to the preceding and following parts as the leaf of a plant is to both stalk and flower.

Thus when speaking of Mut generating Khonsu, this principle is not to be separated from Apet, which is simultaneously both the matrix (the matrical vessel containing the egg, or else the animal matrix) and the principle of fixation of what shall live: Osiris in rebirth (death is always synonymous with fixation or, inversely, fixation is synonymous with death).

Khonsu, crowned with the solar disk cupped by the lunar crescent, bears all the scepters with the exception of the *waufj*, symbol of opening, of blossoming. Khonsu is most often represented mummified but may also assume the form of a hawk-headed man, standing or walking; sometimes he is merged with Thoth, master of time.

In a papyrus of the Ramesside era (Leyden Papyrus), the bond of the three mysteries within the Theban Amun is thus defined:

Three gods are all the gods: Amun, Ra, Ptah, who have no equal. He whose nature [literally, whose name] is mysterious, that is Amun; Ra is the head; Ptah is the body. Their cities on earth, forever established, are Thebes, Heliopolis, and Memphis, [lasting] forevermore. When there is a message from heaven, it is heard in Heliopolis; in Memphis it is repeated to Ptah: a letter is made of it written in the signs of Thoth, for the city of Amun [Thebes] with all that pertains to it. The answer and decision are given in. Thebes, and that which comes forth is addressed to the divine Ennead, all that comes forth from his mouth, Amunis. The gods are established for him, according to his commands. The message, it is for: to kill or to make live. Life and death depend upon it, for all beings, except for him, Amun, and for Ra [and for Ptah], oneness-trinity. (A. Moret, Mystères égyptiens [Paris: Armand Colin, 1913], pp. 127–28)

MYTH AND LEGENDS OF RA

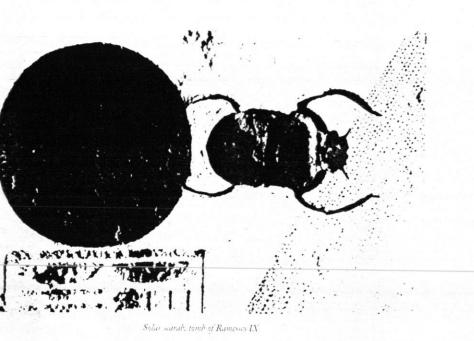
Homage to thee, Ra, who is perfect each day, who vises in the morning without respite and who is Khepri overburdened with labor. . . The purest gold cannot be compared with thy splendor. Carver who hast carved thyself, thou hast east thine own body. O sculptor who never hast been sculpted. . . . Thou who travels the eternity above . . . thou makest thy way equally hencath the earth. . . . During a single small day, thou devourest a space of millions of hundreds of thousands of leagues. Each day is merely an instant for thee, and after having journeyed it, thou reclinest. Likewise thou achievest the hours of the night. Thou performest this task without pause in thine efforts....

Homage to thee, Disk [Aten] of the Day, who hast created human beings and made them to live, He who bastens, he who speed , he who accomplishes his rotations, Khepri of illustrious birth, elevating his perfection in the helly of eclestial Nut, illuminating the Two Lands with his disk [Aten], the primordial one of the Two Lands who has created himself and who saw himself while creating himself. (A. Varille, Hymne au Soleil des architects d'Amenophis III, Souti et Hor)

In the royal tombs of the New Kingdom, Ra is represented in the solar barque sailing upon the celestial stream and traveling the regions of day and of night. The sky is depicted by the body of Nut herself, who swallows the sun each evening and brings it back into the world every morning in the shape of a scarab, Kheper. The sun is said to be Khepri when rising, Ra at his culmination of noon, and Atum in the evening, although some texts reverse the roles of Atum and Khepri.

The scarab is chosen to symbolize the dawning sun because it is the only animal known to make the motions of "rolling" a sphere it itself has perfectly molded, and this gesture is comparable to the solar sphere's apparent movement from east to west. Furthermore, the scarab buries this ball in which it has laid its eggs, concealing it *under the earth*. Well known are the characteristic metamorphoses of this egg from worm to nymph before the scarab appears ready to live in the open, the last transformation requiring humidity.

In the hieroglyphic writing, under the name of Kheper, the scarab is used to express *becoming* and *transformations*. Under the name of Khepri, he corresponds to the dawning sun, the daily reminder of Ra's coming forth from darkness and the primeval waters.



One of the innumerable legends concerning the myth of Ra tells of Isis, whose mouth is the breath of life, whose sentence drives out evil, and whose very word revives him who no longer breathes. When Isis desired to know the secret name of Ra, the sole name unknown to her, she artfully fashioned a serpent out of earth and Ra's own saliva, and placed it in the path of that neter:

Then the venerable serpent bit him, the living fire born from his own self.

Tormented by pain and fever, Ra then summoned unto him all the *neters* born from his flank. And Isis said to Ra:

Teil me thy name, divine father—for the one upon whose name an incantation is pronounced remains alive!

-I am he who made the waters and the earth, tied the mountains, and created what is above. I am he who made the waters and created the celestial tides....

I am the one who made the sky and the mysteries of the two horizons wherein I placed the souls of the neters.

I am he who opens his eyes, thus light becomes.

He who closes his eyes, thus darkness becomes;

Upon whose command spread the waters of the Nile, but whose name is unknown to the neters. I am he who made the hours, and so the days were born.

I am the one who opened the festivities of the year, who created the river. . . . I am he who creates living fire. . . .

I am Khepri in the morning, Ra at his noon, Atum at night.

But the venom was not driven out, the great *neter* was not healed, so Isis said to Ra: *Thy name is not amongst those thou hast told me!*



Sacred searab rolling its ball

And Ra, no longer able to resist the torment, said to Isis: Hark what I shall say, my daughter, so that my name may pass from my breast to thine. And thou must hide it, but thou mayest tell it to thy son, Horus, as a powerful charm against all poison. (A. Erman and H. Ranke, La Civilisation égyptienne, p. 337)

Another legend tells that Ra once reigned over neters and men simultaneously. In the course of time, he grew old, his bones were of silver, his arms and legs of gold, his hair verily of lapis lazuli. Men then plotted against him but His Majesty took heed and called upon his Eye, and Shu, Tefnut, Geb, Nut, and all the Primordials, saving to Nun:

O eldest of neters, in whom I have come into being, and you, primeval gods, lo! The men who have come into existence within my eye have fomented a plot against me. Tell me what there is to be done against that.

Then the Majesty of Nun said: "My son Ra ... so great is the fear inspired by thee, it is sufficient that thine eye be turned toward those who have conceived evil against thee Send thine eye ... to kill them for thee, when it descends in the form of Hathor."

And so this goddess returned, after having killed the men in the desert. And Ra said: Thou must be mighty [sekhem] amongst them ... and it is since that day that Hathor took the name of Sekhmet, the lion-headed. But Ra was dismayed by the bloodshed that so delighted the heart of his messenger:

And Ra said: "Summon unto me swift messengers who can run like the body's own shadow. And these messengers were brought in. And the Majesty of this neter said to them: "Make ye baste toward Elephantine and bring me back a quantity of red ocbre [didi]." Then Ra ordered that this red ochre be ground at Heliopolis by "the One who wears the buckle" while the servants were grinding barley to make beer, and this other was added to the dough and it resembled human blood. And seven thousand jugs of beer were prepared. On the dawn of the day when the goddess was supposed to kill the men, this beer was poured upon the ground.

Now when the goddess arrived and found the fields all flooded ..., she looked down at her reflection and her face was beautiful; she drank and this was pleasing to her heart. So intoxicated did she become, she no longer recognized the men.

THE SACRED ANIMALS

There is one rite that puzzled the Greek travelers, as it still does the modern commentators: the cult of the sacred animals, among which the bull and the ram are the most prominent.

The bull Hap, better known under his Greek form of Apis, is the oldest evidence of what is called the "divinization of an animal." Some documents dating from the First Dynasty tell us that in that epoch and from the oldest time, a solemn ceremony linked to the royal festival was celebrated in honor of the bull Hap. Moreover, royal onomastics give proof of the importance then ascribed to the bull Hap, whose name forms part of the name of Athotis's mother: Khenethap, and also that of the mother of Djoser: Nimaāthap.

Representations show the sacred bull wearing the solar disk and the uracus between his horns. He is black and blazed with a white triangle, a white crescent spotting his flank and an eagle on his neck. Hap originally appears as a fecundating and generating power. At the time of his enthronement, Hap was visiting the sanctuary of Hapi, on the isle of Rhoda near Cairo. The first crescent of the new moon appeared at the very moment he was embarking for Memphis, where, on the day of the full moon, his festivities were to be celebrated.



MYTH

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Little is known concerning the relationship between the bull Hap and Ptah of Memphis. By his titles, we know that he was: living Apis, herald of Ptab, He who makes truth rise up to the neter beautiful of face (surname of Ptah); he was also called son of Ptah.

Funerary papyrus of Queen Maatkare (Twenty-first Dynasty)

Heliopolis (Innu of the North) also had its sacred bull-Mnevis, who was black, and was supposed to display ears of corn along his entire body and tail. He was the herald of Ra-Atum, and his symbol, a bull's head surmounting a pillar, became intimately connected with the symbol of the city of Heliopolis: the pillar Innu.

Since ancient times, Armant, or Innu of the South, honored the bull Buchis and then, toward the Eleventh Dynasty, worshiped a hawk-headed neter of astral origin, under the name of Mentu-Ra. Armant had four temples situated in the vicinity of Thebes: Armant, Tod, Medamud, and Karnak in which the four bulls consecrated to Mentu were venerated. These four Mentu were assimilated to the four masculine members of the Ogdoad, and so great was their importance that the name Mentuhotep was adopted by the kings of that period between the years 2160 and 2000 B.C.

Then, suddenly, Mentu-the supreme neter of such names as Antef and Mentuhotep-lost the supremacy he had exerted and gave place to Amun-Ra and his sacred ram.

There is no doubt as to the astral origin of Mentu, who belongs to the solar cycle (Vandier, Religion egyptienne, pp. 161, 236) and is also cited by the Pyramid Texts as being among the stars. (Pyramid Texts 1081-1378) It is thus of interest to examine celestial phenomena for the reason behind the disappearance of the Mentu cult and its bull in favour of Amun and his ram. Let us listen to one of our astronomers:

At the beginning of our cra, the equinox reached the first degrees of [the constellation of] Aries, the Ram; 2,150 years earlier, it coincided with the first stars of the constellation Taurus, the

42 THE TEMPLES OF KARNAK

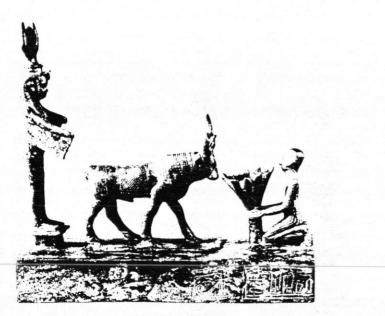
Bull, which had been the equinoctial sign since the year 4300 before our era. It was probably during this epoch that the first stargazers composed the zodiacal constellations, for in all ancient religious myths, the Bull is associated with the Sun's fecundating work upon the seasons and the products of the earth, while no trace is found of an analogous association of [the constellation of] Gemini, the Twins. This was already legend eighteen centuries ago, as Virgil salutes the celestial Bull who opens the yearly cycle with his golden horns:

Candidus auratis aperit quum cornibus annum Taurus, et averso cedans canis occidit astro.

For the Egyptians, the Chinese, and even the early Greeks, the stars of Taurus, particularly the Pleiades, were the stars of the equinox. The annals of astronomy have preserved a Chinese observation of the η star in the Pleiades as marking the spring equinox of the year 2.357 before our era....

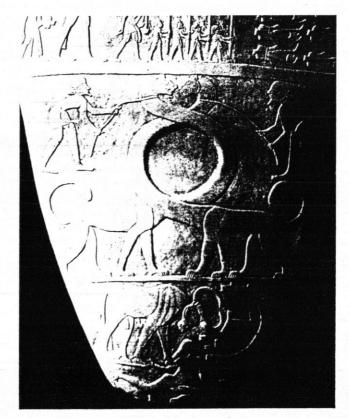
The Ancients conjectured that the political state of the globe was periodic as well, and that the Great Year, as they called it, would return to earth the same peoples, the same occurrences, the same history, just as the succession of centuries brings back to the sky the same aspects of the celestial bodies. As it was accepted that human destinies were dependent upon planetary influences, it was natural to believe that the same configurations of these celestial bodies had to reproduce the same events. (Flammarion, *Astronomic populaire*, p. 55)

It is known what events took place in pharaonic Egypt during the passage of Taurus to Aries (2260 B.C.): a celebrated narrative by the sage Ipuwer recounts the grave revolution at the end of



Isis and the hull Apis

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The Narmer Palette: lower portion

the Old Kingdom, thought to have taken place around 2720 (Borchardt), 2400 (Moret), or 2242 (Drioton). By speaking of what had been destroyed, these "Admonitions" are invaluable for indicating that which had existed. Here are some excerpts:

Forsooth, the wealthy are in mourning. The poor man is full of joy. Every town says: let us suppress the powerful among us.

Forsooth, the land turns around as does a potter's wheel. The robber is a possessor of riches. [The rich man] is [become] a plunderer.

Forsooth, the splendid judgment hall, its writings are taken away. Laid bare is the secret place that was [such formerly].

Forsooth, public offices are opened and [their] census lists are taken away. Serfs become lords of serfs. Forsooth . . . [officials] are slain, and their writings are taken away. . . .

Behold, things are done that have never happened since long times past: the king has been taken away by poor men. Behold, the poor of the land have become rich, and [the possessor of] property has become one who has nothing.

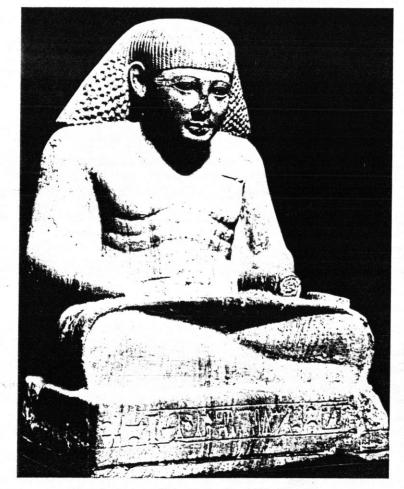
For sooth, the hot-beaded man says: If I knew where God is, then would I make offerings unto him. But this revolution is joyless:

Forsooth, mirth has perished, and is [no longer] expressed. It is groaning that is heard throughout the land, mingled with lamentations.

... The land is given over to its weariness like the cutting of flax.... Would that there might be an end of men, no conception, no birth! O that the earth would cease from noise, and tumult be no more! (A. H. Gardiner, The Admonitions of an Egyptian Sage [Leipzig, 1909])



Great sacred case of Amun (painting from tomb of Pinchas, Nineteenth Dynasty)



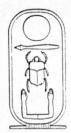
Amenhotep, son of Hapu: statue from Karnak (Cairo Museum)

The end of the "Admonitions of an Egyptian Sage" is lost, but it can be inferred by the ending of the "Sentences of Neferrehu," priest of Heliopolis, who formulated the following prophecy: A king shall come from the South, who is called Ameni.... He shall take the white crown and wear the red crown, and the two lords [Horus and Seth], who love him, shall delight in him. Rejoice, O ye men who live in his time! Under his reign, the son of a man of quality shall recover consideration for his name forevermore. Those who would do evil and who contemplate hostility. [they] restrain their tongues for fear of him.... Law shall recover its place and injustice shall be driven out. Happiness to him who will see these things and who shall serve this king. (Papyrus 1116 B, St. Petersburg, in Moret, Le Nil, p. 268)

Now this Ameni, whose name means the Amunian, or He of Amun, will be Amenemhet, Amun at the head (or "in front"), first king of the Twelfth Dynasty (approximately 2000 B.C.), at the outset of the epoch in which the sun stands in the constellation of Aries, beginning the domination of Amun. This king, inaugurating the new order of that era, is in fact the first to have the name of Amun enter into the designation of the royal name.

It is the time when the predominance of Taurus the celestial Bull wanes, to be replaced by Aries, the Ram of the Amunian epoch. This transition is all the more important in that it inaugurates the time of coincidence between the *astrological sign of Aries* in the spring and the *Ram constellation* of the fixed stars. It is the beginning of the brilliant phase of Egypt's historic epoch, which terminated with the end of [the sign of] Aries, the Ram, and the entry of the vernal equinoctial point into Pisces, the Fishes, about sixty years before Christ.

THE TEMPLES OF KARNAK



The site of Karnak comprises an aggregate of monuments grouped around the great temple of Amun. A wall of sunbaked brick encloses what would now seem an immense field of ruins, were it not for two very beautiful obelisks and the colossal Amunian colonnade of the hypostyle hall, still rising above the debris.

Two temples were built against that enclosure: to the north, a temple consecrated to Mentu, and to the east, the temple of Akhenaten dedicated to the cult of the solar disk (the physical sun) Aten, a monument that is today completely destroyed. To the south, a road led to the temple of Mut, symbol of maternal femininity.

The surrounding wall of sunbaked brick was approximately 12 meters wide and 16 meters, high. It contained four monumental gates: the gate of Nectanebo to the east, that of the first pylon to the west, and the gates of Euergetes and the tenth pylon to the south. In addition there were four entrances of lesser dimensions.

THE DEVASTATION

An attempt to account for the ravaged state of these monuments led to the study of the causes of successive destructions and their dates. The conflagrations by the Persians are known particularly those brought about by the mad Cambyses, but it is also known that some of the edifices were built *after* the Persian devastations. And although reference is made to a considerable earthquake as having occurred at the beginning of the Christian era, travelers of the seventeenth and eighteenth centuries mention monuments that no longer exist today.

It happened in the last century that the Mamours (the local authorities) systematically destroyed the monuments of Karnak and Luxor to recover the sandstone and saltpeter. To speed and simplify this work, they had no scruples about using explosives to crumble the obelisks, statues, columns, and pylons.

These are the results of the Mamours' operations from 1836 until the winter of 1840:

Beginning with the great pylon of the hypostyle hall, workmen had already begun rapid demolition when the Europeans intervened and the pylon was saved by their courageous efforts. The Mamours then directed their destructive fury toward [other constructions].

At the same time, a protest was addressed to the Ministry of Public Education in Cairo in the hope of saving the ancient monuments, but Mouktar, the director, turned a deaf ear.

The bavoc continued, and when the gigantic propylons flanking the entrance to the avenue of the sphinxes were reached, explosives were employed with great success.

The pylon numbered 32 was entirely destroyed. The pylon situated between numbers 36 and 37 was approximately three-quarters demolished.

The pylon marked number 36 was partially wrecked, about half of each wing.

The remainder of the temple marked M was destroyed. Moreover, they removed all of the material strewn in the vicinity of Luxor and Karnak and in differing degrees mutilated other pylons and portions of the great temple itself. (After G. Gliddon, cited by Legrain)

In 1843 the demolitions still continued, and Selim Pasha, governor of Upper Egypt, was exploiting the ruins of Thebes once more; here nine temples and pylons had already disappeared to satisfy the needs of the government....

It was only in 1858 that the viceroy, Said Pasha, attached Mariette to his services and instituted the Service of Antiquities, which was destined to prevent further occurrences of such acts of vandalism. (G. Legrain, Les Temples de Karnak [Brussels: Vromant, 1929], pp. 83–84)



The second pylon of the temple of Amun in Karnak, tomb of Pinehas (Nineteenth Dynasty)



derial photograph of the temples of Karnak (1947)

THE TEMPLES OF KARNAK

A comparison of the photograph showing the actual state of the ninth pylon (pl. 399) and the etching from *Description de l'Egypte* (below) serves to prove that the western wing of this pylon was then still almost intact, missing only seven courses of stone, while by now almost everything has disappeared. Furthermore, this etching verifies that the colossus standing before the gate of this pylon was then intact, while now only the granite base remains.

But whatever the present state of these ruins may be, they still present sufficient evidence of an extraordinary work, and are a source of study that is far from exhausted.

THE FOUNDATION OF THE TEMPLES

The ritual of laying the foundation goes back to the remotest antiquity. Numerous texts affirm that the plans of the temples were conceived according to *divine books*. These were said to have been transmitted in *ancient writings*, either by miracle or by a sage such as Imhotep, son of Ptah (Third Dynasty) or Amenhotep, son of Hapu (Eighteenth Dynasty), who, in the Late Period, were represented on certain Ptolemaic bas-reliefs as "divinized" (see figs. 72 and 104, and pls. 309 and 314).

During the neters' reign, a book of founding of temples for the neters of the first Ennead had been drawn up by Imhotep, "chief celebrant" of the cult of his father Ptah. This book had been taken to the heavens when the neters retired from earth, but Imhotep had let it drop from the sky to the north of Memphis. It was according to the prescriptions in this book that the general plan of the Ptolemaic temples at Edfu was determined. A similar divine origin was ascribed to the plan of the temple of Dendera; the buildings were reconstructed under the Ptolemais following a general plan veritien on a goatskin in ancient writing at the time of the followers of Horus [hence predynastic].... It was found



View of the ninth pylon in 1799 (Description de l'Egypte)

inside a brick wall of the royal house in the times of King Merire Pepi I (Sixth Dynasty); another text attributes the find to the time of King Cheops (Fourth Dynasty). According to a Twelfth Dynasty manuscript on leather, King Senusret I (Sesostris I) did not proceed otherwise in founding or renovaring the foundations of the temple of Ra in Heliopolis: there, also, an officiant was provided with the *divine book* in order to draw up the plan of the editice. We can likewise acknowledge divine origin for the plans of all the Egyptian temples: the king constructed the house of his fathers strictly according to the "projects" they themselves had established while they lived and reigned in the valley of the Nile. (Moret, *Caractère religieux*, p. 131)

At the base of her obelisks in Karnak, Hatshepsut caused the account of their execution to be carved: I have done this from a loving heart for my father Amun, I have entered upon his project of the first occurrence, I was wise by his excellent spirit, I did not forget anything of that which he exacted. My majesty (Jem.) knoweth that he is divine. I did (it) under his command, he it was wholed me; I conceived not any works without his doing, he it was who gave the directions. . . . I erred not from that which he commanded, my heart was wise [in Esye, the neter of wisdom] before my father, I entered upon the affairs of his beart. (Breasted, Ancient Records, vol. 2, § 316)

These texts indicate that it was not a matter of arbitrary construction according to the whims of a monarch or "the state of his finances" but that the erection of any building whatsoever obeyed theological dictates.

In Karnak, the sanctuary of the Middle Kingdom stood as the now-destroyed heart of the future edifice. Around it the entire temple of Amun was developed according to a complex plan undoubtedly foreseen from the beginning.

In the Eighteenth Dynasty, the temple of lpet-sut consisted of successive enclosures, to which Tuthmosis III added chapels to the north and east as well as his sed-festival temple. This king commissioned a granite stela relating the enlargements he undertook on the temple of Karnak. The text begins: . . . the king himself commanded to put in writing according to the statement of the oracle, to execute monuments before those who are on earth. . . . I built it for him according to [bis] desire. . . . I fulfilled that which was prescribed. (Ibid., §§ 606–7)

On this same stela, Tuthmosis III states that he gave orders to prepare for the ceremony of *stretching the cord*. It was to take place on the day of the new moon, corresponding to the day of the tenth feast of Amun, in the year 24 of his reign, the last day of the second month of the second season. This inscription confirms the importance of *the choice of day*, the importance, hence, of a precise date of the year for establishing the foundations of the temple. The *stretching of the cord* is the first ceremony of the ritual and consists in defining the orientation of the structure in relation to true north. This is accomplished by means of the "circumpolar stars," an operation described at every epoch, and of which two examples follow:

In the temple of Abydos, Sefekht-Seshat and King Seti I each hold a stake, which they are driving into the ground by means of a mallet: I have founded it with Sokaris [says Seshat]: I have stretched the cord at the location of its walls; while my mouth recited the great incantations. Thoth was there with his books.... In order to establish the enclosure of its walls, Ptab-Tatenen measured the ground, and Tum was there.... The mallet in my hand was of gold, I struck with it upon the post and thou [the king], thou wert with me in the form of Hunu [the neter of geometry]. thy two arms held the mattock; thus the four angles were established as solidly as the four pillars of beaven.

In the temple of Edfu, the king speaks in this manner: I have taken the stake and the mallet by the handle. I have grasped the cord with Sefekht: my gaze has followed the course of the stars. My eye was turned toward the Great Bear, I have measured the time and counted [the hour] by the elepsydra, and then have I established the four angles of thy temple. (Moret, Caractère religieux)

These are explicit texts, and it is surprising that some scholars still contest the importance of the orientation, measurements, and geodetic positions of the temples. And yet the investigations and affirmations of such specialists as the architect-Egyptologist Borchardt, the scholar Antoniadi of the Meudon Observatory, the eminent astronomer J.-B. Biot, and the great Laplace, cannot be questioned.

Borchardt is amazed by the extraordinary precision in the execution of the Pyramids, and Antoniadi summarizes earlier studies concerning these structures:

The partially astronomic character of the pyramids is established by the following facts:

- 1. They rise almost exactly and intentionally on the thirtieth parallel of the northern latitude.
- 2. They are marvelously oriented on the cardinal points, as was pointed out by the rirenchman de Chazelles in 1694.
- The inclined corridors, before their closure, were colossal instruments for measuring when stars crossed the meridian, by far the largest ever built. (Antoniadi, Astronomic egypticnne, p. 119)

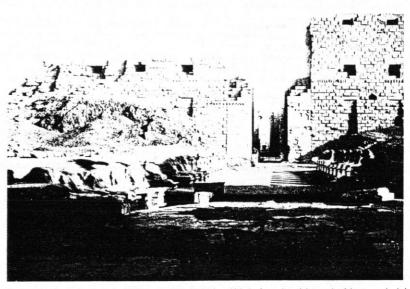
This astronomer adds, concerning the *orientation* of the Cheops pyramid, whose meridian line, according to Borchardt, does not deviate more than four minutes from the true north-south line:

This astonishing fact made it possible for Proctor to remark that the orientation of the monument "is much closer to exactitude than the best observation made by Tycho" with the celebrated quadrant of Uranibourg, . . . The base is remarkably horizontal, . . . The precision of the four base angles is nothing short of incredible . . . and Jomard's intuitive discovery of the unexpected fact that the perimeter of the base of Cheops's monument is equal to a half minute of the terrestrial degree seems to indicate that the Egyptians had measured the earth with the greatest success. (Ibid., pp. 119, 142)

In Description de l'Egypte, E. Jomard drew up a table of itinerary measurements in Egypt, comparing the distances that different classical authors have reported in ancient measurements with the same distances measured on our maps. He noted the existence of several units of measurements;

the small stadium of 100 meters (Herodotus, Diodorus, Strabo); the large stadium of 100 fathoms, namely, one-tenth of a minute of an arc of the terrestrial meridian (Diodorus, Strabo); the stadium of 300 pharaonic cubits (Eratosthenes, Hipparchus).

Aristotle wrote (in De coelo, 2.16): The mathematicians who have attempted to calculate the size of the Earth's circumference say that it could reach up to forty myriad stadia (400,000 stadia). Now, Aristotle is speaking of a stadium of 100 meters, and furthermore, no Greek astronomer is known prior to Aristotle from whom he could have derived this dimension of the earth's circumference. Eratosthenes, to whom history attributes the first attempt to measure an arc of the terrestrial meridian, lived more than a century after the great philosopher; his work has often been commented upon by geodesists and astronomers, and all arrive at the same conclusion: the dimensions were given by Eratosthenes in stadia of 300 pharaonic cubits, and the result is surprisingly accurate despite the grave errors committed in his calculations and observations. The fact that Eratosthenes was librarian at Alexandria permitted Laplace to conclude: Eratosthenes' two errors would have more or less compensated each other, leading one to believe that this astronomer merely reproduced a measure of the earth that had been carefully executed in ancient times and whose origin has gotten lost. (Exposition du Systeme du Monde)



Photograph taken before 1945. Scaffoldings of unbaked brick in which the first pylon of the temple of Amun was buried.

We must limit ourselves to these few examples and simply formulate the question posed by all scholars who have been preoccupied with the origin of the first terrestrial measurements: if the Greeks were not their authors, to whom do we owe them? For the clarification of such questions, it is important, each time a pharaonic edifice permits it, to verify the measures inscribed therein and to disclose their nature.

Jomard, Gratien the Elder, Herschel, and Borchardt have studied the astronomical conclusions to be drawn from the orientation and global position of the Cheops pyramid. J.-B. Biot has done likewise with regard to the temple of Dendera, *reconstructed upon an older temple*, and its circular zodiac. Biot noticed that the straight ascension of Sirius brings this star into the axis of the papyrus stem, which is surmounted by a falcon and situated on the principal axis of this monument: *all these special circumstances will later be seen as linked to the original relationships between the orientation of the building, its latitude, and the absolute position of Sirius in the sky.* This scholar further observes that Sirius is recalled by the star sculpted between the horns of the cow, its symbol, precisely in alignment with the β star of Cancer, which indicated *the part of the ecliptic then situating the summer solstice with which Sirius rose simultaneously.*

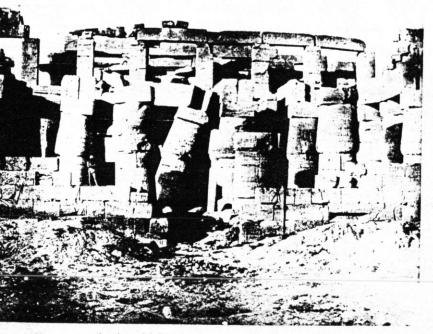
A mass of literary documents indicates that ancient astronomers frequently made use of simultaneous risings-in-order to-call attention to particular points on the celiptic. . . The singular precision with which we here find the emblem of Sirius located close to the solstice on Dendera's monument seems to indicate that the astronomers who traced this celestial tableau knew how to make uncommonly able use of that procedure.

Biot then remarks that the longitudinal axis of the temple of Dendera is oriented approximately 18 degrees to the east. It follows that the true solstitial point was thus directed toward true north and furthermore, that the rising of Sirius was exactly or almost exactly in a borizontal direction, which was that of the south and north walls of the temple. It was therefore feasible to locate Sirius in its rising simply by aligning oneself to the borizontal direction of the transverse walls.

Subsequently noting that the temple of Esna (which contains a rectangular zodiac), is oriented in such a manner as to form a complementary angle to the angle of Dendera, Biot concluded:

If, then, we were certain that the two temples really existed at the remote age that the circular zodiac represents; if, further, we could suppose that the Egyptian priests were sufficiently instructed to profit of the advantages offered them by the orientations of these buildings, it would be conceivable that even in relatively few years they could have been able to recognize that the points of the rising and setting of the different stars changed places on the horizon and after a certain time no longer corresponded to the same terrestrial alignment. They would then have been able to observe the general and progressive displacement of the celestial sphere in relation to the meridian line; in other words, the most apparent effect of *the precession of the equinoses*. (J.-B. Biot, *Recherches sur plusieurs points de l'Astronomic égyptienne*)

A thorough study of the calendars of Egyptian festivals by the chronologist E. Meyer confirms Biot's hypothesis that the priests were acquainted with the phenomenon of the precession, a discovery already attributed to them by Proclus Diadochus.



Great hypostyle hall, north section (photograph by Maxime du Camp)

Similar inquiries should be undertaken for every temple, and it is regrettable that no complete plan of Karnak has ever been drawn up with precision. The Anglo-Egyptian cadastral survey made at the beginning of the century, although very exact in its overall orientations, is on too small a scale to permit precise measurements, and without minute measurements, architectural readings are impossible. What the above citations show in their partial analysis should serve as guide for all the religious edifices of pharaonic Egypt, as the same fundamental principles must always be found in the architecture. In the main, these directives are: the orientations, of prime importance; the trigonometry and measurements, with their geodetic meaning; the axes of construction as well as the way the bas-reliefs are laid out on the walls; the "transparencies" and "transpositions," which complete the meaning of the texts or scenes on each side of the same wall.

In his work entitled Une Chapelle de Sésostris I à Karnak (1956), P. Lacau keenly notes the walking direction of the figures and the incised inscriptions on the exterior of this small building and those in relief that are found inside. He also stresses the importance of the particular placing of certain inscriptions. This scholar insists on the sacred character of ancient measurements, which were placed under the protection of the neter, and he ascertains that in the lower level of this sed-festival chapel there is, in addition to the ritual list of names, a veritable cadastre of the entire territory. Further, valuable indications are given concerning the size of Egypt and the levels of floods of the Nile by means of inscriptions on votive cubits. Lacau points to the existence of several fragments of the granite naos of Tuthmosis III, which bear analogous information. It is indeed remarkable that these proofs of geodetic knowledge are echoed on the surrounding wall of the sanctuaries.

It is important to know these details while walking through Karnak because, from the entrance on, noteworthy facts are encountered: the leveling of the base of the first pylon does not deviate from the horizontal for even one centimeter along its entire length. The length, counted *between the tracings on the ground* corresponds to 60 fathoms, that is, to the thousandth part of a degree of the arc of the terrestrial meridian. (See commentary to pl. 9 for the detail of these measurements.)

THE SYMBOLISM OF THE ORIENTATIONS

The course of the starry sky and its luminaries imposes upon natural life its becoming and maintenance. The plant and animal kingdoms are distinctly ordered into categories; some are under tribute to the day, others to the night and, still more specifically, to morning and evening, while all are submissive to the seasons.

The terrestrial globe is first characterized by its own evolution related to solar evolution, and next by energetic effects, magnetic and electric consequences of its own revolution.

Thus the magnetic north pole attracts the electronic effects of solar emission and, mechanically, it resorbs, it *absorbs* the terrestrial continents.

The magnetic south pole *concretizes*, that is, it materializes energy and puts forth the lands as would an immense vortex hollowing itself in the north and rejecting to the south. North is the pole from which the diurnal rotation is observed as going from right to left.

These are realities to which the monumental works of pharaonic Egypt conform.

We already know that the crowns—the white and the red—refer to the two lines of genesis, one lunar, one solar; they are the emblems of the Two Lands, southern and northern, of the empire of the world, namely, of *per-aā*, the pharaoh (or the "great house," as it is translated). More precisely, *per* means "that which encloses," consequently, that which renders the abstract manifest, as the life-bearing seed.

The sun and the celestial bodies appear in the east, whence the identification, through the white crown, of the east with the south, which *gives*; they disappear in the west, whence identification, by the red crown, of the west with the north, which *absorbs*. The same hieroglyph designates "north" and "to fill."

The king's mystic name, the crowns, the attributes—each detail takes on significance by situating these figurations in relation to the orientation. There are four "orients" and two "poles," hence six orientations to be taken into account. Man, for the northern hemisphere, is always situated on the north pole, facing the equator. Therefore his left side is east, and indeed the same hieroglyphic symbol designates east and the left; the right side is west, the *amenti*, where the Eye of Ra, the sun, will set, and again it is one hieroglyph that designates right and the west. Man is considered as looking at the day, and he belongs to the sun. But placing herself opposite and in front of him is woman, who therefore faces the night: the orientations of man and woman are reversed.

The night with its luminary is the kingdom of Osiris wearing the white crown, and the four phases of the moon are disclosed in the symbolism by the position of the hands and scepters of this *neter*. The last quarter, for example, is the time of the passion of Osiris, which ends with his death at the conjunction of the new moon. (The Gospels also associate the time of Christ's death with an eclipse.)

The Osirian principle is that of eternal renewal of nature, for daily as well as for monthly and yearly life, but equally for the universal "continual (or *constant*) creation," for unceasingly, the world ends and begins simultaneously. It is the femininity of nature, the woman symbol, that restores corporeal being; she perpetuates. The Osirian *function* is therefore feminine but contains, as does woman, rudimentary male organs and seminal possibilities. Osiris is accordingly represented as king but swathed (as a munimy).

It must not be forgotten that Osiris is a *functional* principle, while the king is a definite fact. Thus the deceased is called an Osiris, which means he has entered into the phase of his transformation. When it is said that Isis conceives Horus from the member of the dead Osiris, it is meant that she conceives him from the function of "blackness," of seminal decomposition necessary for a new generation. Horus is the son of a ray of light and not of a mortal seed.

And so whenever a reversal of orientation of the crowns is shown—the white to the north and the red to the south—this must be understood to refer to life's nocturnal face.

Darkness (the night) is symbolic of the enemies of Ra (the light) and constitutes the Dwat the site of transformations—which, in living nature, is represented by the world of insects whose metamorphoses—egg, nymph, chrysalis—symbolically correspond to the phases of the generation preparing the morning's birth.

The Dwat is therefore the reverse of the world; it is the netherworld, where the soul undergoes judgment, be it to go higher, be it to grope in the eclipse of all light. It is in this world of the Dwat that Ra wanders during his nightly course, being swallowed every evening by Nut, to be brought back into the world in the morning. The course from west to east is in a natural way symbolic of the soul desiring reincarnation. It is also the noeturnal course toward the fascent light.

On the contrary, the progression from east to west is notably a *conscious* ascending toward the culmination of noon. Day knows renewal in the morning, noontime maturity of visible life, and decline toward evening *(amenti)*, where "Ra is an old man."

All these phases of life are noted on the royal figurations by the proportions of the head in relation to the height of the body and by the golden mean, with the umbilicus being the point of reference, as the bas-reliefs verify.

EXCERPTS FROM THE DEDICATIONS OF PTOLEMY VIII EUERGETES II, INSCRIBED ON THE DOOR OF KARNAK'S SECOND PYLON

Inscription on the northern doorjamb:

Thebes, site of origin and outlet of Nun, of the one whose name is hidden [Amun].

[The outlet of Nun is the place where the demiurge—Amun, in this instance—emerged from the primordial abys of the waters.]

He made it [Thebes], he created it, he cooked it by the flame of his eye into marshland by the banks of the water. . . .

He behalded the things to come and they bappened at once. He created what was uttered by his

He created Tatenen. He wrought the Eight. He formed his hody like that of a sacred child who emerged from a lotus in the middle of Nun. He illuminated the lands with his two eyes.

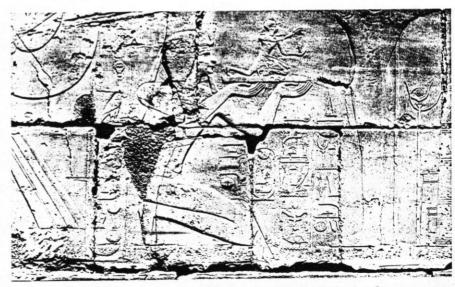
He made men. He created the neters.

He organized the college of the Ennead. He instituted the Ogdoad. -

The hillock of the sucred eye at the origin, until the earth had become the covering of Nun, that its height had become its height and that the heavens had absorbed the energy of the genii, so that the two uraci [the two eyes] were filled and the Eye of Horus was exalted.

Inscription on the southern doorjamb:

He has restored the great gate, without equal in Egypt—the portals that close it are of true cedar of Lehanon plated with copper from Asia; their modeling is perfect in heauty. Its total height is 53²/cubits



Offering by Seti I of the "medjet unguent" with the "silver statue" to his father, Amun-Ra

and its width is 29½. One rejoices to see it in the light. The height of each of its two panels is 36 cubits, and that which it utilizes would be sufficient for two doors—in its name of magnificent doors illuminating the city-of-the-scepter-of-Aman-Ra, great of abodes in front of the Eye of Ra, lord of respect in Karnak, the queen of cities and nones, the shore of the observatory of the deminage, the right eye of aniversal lord [Harakhtes], and the sky of the one who has produced himself [Amin].

It came to pass, while His Majesty [Amun] was hiding his head in the presence of his borders, and while the earth was in the depths of inundation, that he set foot upon it. It banished his torpor completely when he came to rest upon its surface. This was the ground that became the solid hillock that emerged in the beginning. (E. Drioton, "Les dédicaces de Ptolémée Evergète II sur le deuxieme pylône de Karnak," Annales du Service des Antiquités de l'Egypte 44 [1945])

The transcription of cubits into meters would give the following measures for the great door of the second pylon:

Total height	28.10 meters
Width	15.44 meters
Height of the door leaves	18.85 meters

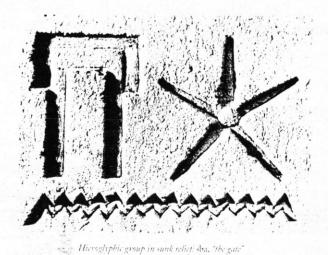
The only measure taken in situ by Legrain was the height of the opening: 18.80 meters. Farther on, the text mentions the distribution of ground between all the cities, praising the importance of Thebes, of the Nile's inundations, of the crops, and so forth.

A dealer of Theorem, of the INne's infinitiations, of the crops, and so forth.

And so the north doorpost speaks of the principles and metaphysics of creation, while the south door post recounts material accomplishments, in conformity with the teaching of the orientations.

ENTERING AND COMING FORTH

The inscriptions and sculpture that are carved in sunk relief signify *entering, penetrating*, while the same figures carved in relief denote *emerging*, or *coming forth*. This refers to the gesture of entering



and emerging in general, as well as to the function of causing to penetrate or of causing to burst forth; as, for example, "opening and closing" may signify "to loose" and "to bind" with regard to the keys of Saint Peter.

All activity provokes a reaction, and life is phenomenal only by alternation. Action and reaction, entering and emerging, opening and closing: therein lies the entire esoteric story of the great temple of Amun.

This is exemplified in the great hypostyle hall of the temple of Amun, where all the figurations of the northern half are bas-reliefs in the name of Seti I, while those of the southern half are sunk reliefs in the name of Ramesses II.

On the inner face of the north wing wall of the second pylon, the barque Userhat of Amun, towed by the pilot barque, is making its way toward the south, toward the temple of Luxor (the Apet of the South): *the barques are carved in relief in that they are indicated as leaving the temple.*

On the inner face of the south wing wall of the same pylon, the barque Userhat of Amun and the pilot barque are making their way toward the north, returning from Luxor to Karnak: here *the barques are incised, in that they are entering the temple.*

On the inner face of the north wing of this pylon, only scenes of offering are represented on the second register: the silver statue, the milk vases, and the four calves, as well as the purification and ritual ascent to the sanctuary, and so on.

To the south, however, the second register unfolds the entire ritual of foundation of the temple.

To the *north*, then, the religious themes and principles are represented *in relief*, while to the *south*, the achievements are in *sunk relief*.

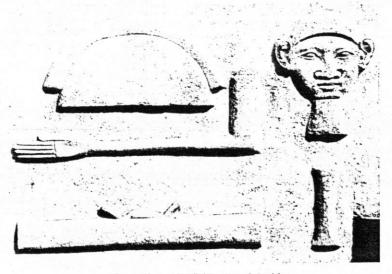
The red fire of Ra, enclosed in Atum, is still Sethian; the kings named Seti symbolize this state. By reaction, this fire provokes whiteness, which is evoked by the *nekbakba* scepter placed above Min's raised arm and by the silver statue offered to him. At its perfection, this whiteness will be the white crown, the South, which in turn will call forth redness, and this redness will be achieved by Ramesses.

SUMMARY

The original temple dates from the advent of the Amunian epoch of the constellation Aries under Sesostris I (Twelfth Dynasty). During the culminant lunar moment of the kings named Amenhotep and Tuthmosis, monumental works were added that, although ruined, are still to be seen today. The *sed*-festival sanctuary was shifted toward the east, and a tenth pylon opened its door upon a "back and forth" to the temple of Mut the Great, lady of Asheru (Asheru figures in Greek myth under the name of Acheron, the *river* of the infernal regions). Then the great Amunian colonnade was constructed, similar to that of Luxor.

All the temples surrounding the great temple of Amun participate in the opus that it teaches: they include the small temple of Ptah, reconstructed upon the site of the ancient sanctuary of Ptah from the epoch of Taurus, the Bull, and in relation to it, the temple of Mentu, reconstructed upon the ancient great sanctuary, also dedicated to Taurus. This Mentu-Ptah is the Greek Hephaestos, the Latin Vulcan "who forges metals." The most recent exeavations have furnished proof that this site was indeed a strange and important laboratory.

The great temple of Mut—which is also the temple of Ptah's female aspect in the guise of the sanguinary Venus-Sekhmet sweetened by a bath in the waters of the Abaton at Aswan—is the site of the conception that *brings about the death of the seed* in order to gestate the new fruit. It is this



Hieroglyphic group in relief: "to appear gloriously"

phase of death that is represented by the temple of Mut, the maternal: it is the reversal of orienta tions because with this death of the seed begins the materialization of its virtuality.

The temple of Khonsu, on the other hand, becomes the indispensable auxiliary to the Ramesside work. What was conceived through Mut is here gestated: the blackness of the eighth month, a renewal—for all beginning is a blackness, just as all conception is a requisite death of that which has given the impulse toward a new life. In this way, Khonsu plays a double role: one at the beginning, at first referred to by the Ramesside kings, and the other in the middle of the gestation of the "king."